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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CUTLER, ALBERT H

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/643,694	Applicant(s) KIM ET AL.	
	Examiner ALBERT H. CUTLER	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 11-15 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to communication filed on December 19, 2007. Claims 1-15 are pending in the application. Claims 1-5 and 11-15 are examined and claims 6-11 are withdrawn from consideration. Claims 16-20 have been cancelled by Applicant.

Response to Arguments

2. Applicant's arguments with respect to claims 1-5 and 12-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 12 and 15 are objected to because of the following informalities: Lack of clarity and precision.

4. Claim 12 reads, "a separate assembling plate attached to said top **surfaced**". Please amend claim 12 to read, "a separate assembling plate attached to said top **surface**", or something of similar nature. Appropriate correction is required.

5. Claim 15 reads, "said opening has a sidewall has an inner sidewall". Please amend claim 15 to read, "said opening has an inner sidewall", or something of similar nature. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada(US 6,335,759) in view of Loritz et al.(US 5,748,441).

Consider claim 1, Harada teaches:

A digital camera module(figure 1), comprising:

a barrel(6) having external threads on an external surface thereof(see figure 1),
with one or more lenses set in the barrel(column 3, lines 9-21),

a camera module housing(5) assembled with the barrel(6), the housing(5) having
an internally threaded opening through which the barrel is mounted to the housing(see
figures 1 and 3);

an image sensor(2) converting an image of a subject into an electrical image
signal(column 2, lines 59-67); and

a substrate(1) having an electronic circuit(column 2, lines 59-67), with the image
sensor(2) installed on the substrate(see figure 1).

However, Harada does not explicitly teach a magnetic assembling plate separate
from and mounted to an upper surface of the barrel.

Loritz et al. similarly teach of a camera module(16, figures 2-7, column 4, lines 3-16).

However, in addition to the teaching of Harada, Loritz et al. teach a magnetic assembling plate(24, figure 2) separate from and mounted to an upper surface of the barrel(See figure 2, column 4, lines 9-16. A magnetic lens cover is assembled to a video camera.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to mount a magnetic assembling plate as taught by Loritz et al. to an upper surface of the barrel taught by Harada for the benefit of protecting a camera lens in an unused state(Loritz et al., column 2, lines 44-46).

Consider claim 5, and as applied to claim 1 above, Harada does not explicitly teach an assembling plate. Loritz et al. teach of a magnetic assembling plate(see claim 1 rationale).

Loritz et al. further teach that the assembling plate is attached to the upper surface of the barrel by an adhesive(A magnet causes adhesion, column 2, lines 47-49, column 4, lines 9-16).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Loritz et al. as applied to claim 1 above, and further in view of Rhoad et al.(US 2004/02020002).

Consider claim 2, and as applied to claim 1 above, the Harada does not explicitly teach an assembling plate. Loritz et al. teach an assembling plate having magnetic properties(column 2, lines 47-49, column 4, lines 9-16). However, Loritz et al. do not explicitly teach that the assembling plate is made of metal.

Rhoad et al. is similar to Loritz in that Rhoad et al. teach of a magnetic lens cover(see figure 1, paragraphs 0024, 0028-0030 and 0047).

However, in addition to the teachings of Harada and Loritz et al. Rhoad et al. teach that the assembling plate is made of a metal sheet which is magnetically attracted to a magnet(see all figures, paragraphs 0024 and1 0030).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have the assembling plate taught by the combination of Harada and Loritz et al. comprise a metal sheet which is attracted to a magnet for the benefit that the assembling plate can be quickly and easily removed(Rhoad et al., paragraph 0010).

10. Claims 3 and 4(3) are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Loritz et al. as applied to claim 1 above, and further in view of Saito et al.(US D489,388 S).

Consider claim 3, and as applied to claim 1 above, the combination of Harada and Loritz et al. does not explicitly teach that the assembling plate is provided with an

opening allowing light beams to reach the lens of the barrel and a baffle arranged to prevent an incidence of undesired light beams to the lenses of the barrel.

Saito et al. similarly teach of a digital camera module(see title, figure 1) with an assembling plate mounted on the upper surface thereof(See figure 1).

However, in addition to the teachings of Harada and Loritz et al., Saito et al. teach that the assembling plate is provided with an opening allowing light beams to reach the lens of the barrel(see figure 1, a circular opening is formed in the center of the assembling plate.) and a baffle arranged to prevent an incidence of undesired light beams to the lenses of the barrel(See figure 1, the circular opening comprises a baffle.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to provide the assembling plate taught by the combination of Harada and Loritz et al. with an opening allowing light beams to reach the lens of the barrel and a baffle arranged to prevent an incidence of undesired light beams to the lenses of the barrel as taught by Saito et al. for the benefit of providing protection for the lenses while still allowing the camera to function.

Consider claim 4, and as applied to claim 3 above, the combination of Harada and Loritz et al. does not explicitly teach that the assembling plate is provided with a plurality of tool holes so as to hold the barrel during a process of assembling the barrel with the housing.

However, Saito et al. teach that the assembling plate is provided with a plurality of tool holes(See figures 1 and 2. There are four opposing tool holes on the outer periphery of the assembling plate.).

11. Claim 4(2) is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Loritz et al. and further in view of Rhoad et al.(US 2004/02020002) as applied to claim 2 above, and further in view of Saito et al.(US D489,388 S).

Consider claim 4 and as applied to claim 2 above, the combination of Harada, Loritz et al. and Rhoad et al. teach of an assembling plate made of magnetic material(see claims 1 and 2 rationale). However, the combination does not explicitly teach that the assembling plate has a plurality of tool holes so as to hold the barrel during a process of assembling the barrel with the housing.

Saito et al. similarly teach of a digital camera module(see title, figure 1) with an assembling plate mounted on the upper surface thereof(See figure 1).

However, in addition to the teachings of Harada, Loritz et al. and Rhoad et al., Saito et al. teach that the assembling plate is provided with a plurality of tool holes(See figures 1 and 2. There are four opposing tool holes on the outer periphery of the assembling plate.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to provide the assembling plate taught by the combination of Harada, Loritz et al., and Rhoad et al. with a plurality of tool holes as taught by Saito et

al. for the benefit that the assembling plate would be easier to grip during assembly with the image sensor module and thus provide a faster and easier assembly.

12. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada in view of Loritz et al. as applied to claim 1 above, and further in view of Saito et al.(US D489,388 S).

Consider claim 11 and as applied to claim 1 above, the combination of Harada and Loritz et al. teaches of an assembling plate made of magnetic material(see claim 1 rationale). However, the combination does not explicitly teach that the assembling plate has a plurality of tool holes so as to hold the barrel during a process of assembling the barrel with the housing.

Saito et al. similarly teach of a digital camera module(see title, figure 1) with an assembling plate mounted on the upper surface thereof(See figure 1).

However, in addition to the teachings of Harada and Loritz et al., Saito et al. teach that the assembling plate is provided with a plurality of tool holes(See figures 1 and 2. There are four opposing tool holes on the outer periphery of the assembling plate.).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to provide the assembling plate taught by the combination of Harada and Loritz et al. with a plurality of tool holes as taught by Saito et al. for the

benefit that the assembling plate would be easier to grip during assembly with the image sensor module and thus provide a faster and easier assembly.

Allowable Subject Matter

13. Claims 12-15 are allowed.

14. The following is a statement of reasons for the indication of allowable subject matter:

15. Consider claim 12, the prior art of record teaches:

A digital camera module comprising:

a barrel having a top surface;

a separate assembling plate mounted on an upper surface of the barrel;

wherein said assembling plate is made of a magnetic material and is assembled to the barrel;

a lens set in the barrel;

a tubular camera module holding said barrel; and

a substrate having image sensor disposed thereon, with said module being attached to said substrate in a position selected to allow an image to be focused by said lens onto said image sensor;

wherein said barrel includes a baffle arranged and constructed to prevent the incidence of undesirable light beams on said lens.

However, the prior art of record does not teach nor reasonably suggest that the assembling plate is shaped to be engaged during the assembly of the digital camera

module for manipulating the barrel via magnetic material used to hold said barrel as required by claim 12.

16. Claims 13-15 are allowed as depending from an allowed claim 12.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

18. Bigler et al.(US 2002/0171756) teach of a lens cap comprising magnetic material(see paragraph 0024).

19. Dowe(US 5,956,527) teaches of providing a plurality of tool holes in a lens cover(see figure 3, column 2, lines 41-55).

20. Akin, Jr. et al.(US 3,642,345) teach of a magnetic lens cover(see abstract, column 3, lines 46-61).

21. Motai(US 6,188,430) teaches of providing a plurality of tool holes in a lens cover(see abstract).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALBERT H. CUTLER whose telephone number is (571)270-1460. The examiner can normally be reached on Mon-Thu (9:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc-Yen Vu can be reached on (571)-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC

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